



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,913	01/11/2002	Jiang Fan	2312-PAT	4766

30084 7590 06/16/2005

DONN K. HARMS
PATENT & TRADEMARK LAW CENTER
SUITE 100
12702 VIA CORTINA
DEL MAR, CA 92014

EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,913	FAN ET AL	
	Examiner	Art Unit	
	Julian Mercado	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3-25-05, 10-26-04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-24 and 26-31 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1745

DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed March 25, 2005 and October 26, 2004.

This Office action is made Non-Final in view of an inadvertent omission of claims 26-28 from the statutory ground of rejection statement based on Dasgupta et al., though Dasgupta et al.'s teachings towards these claims have been discussed in detail in the prior Office action.

Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 13-15, 18-24 and 26-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dasgupta et al. (U.S. Pat. 5,464,706).

Art Unit: 1745

The rejection is maintained for the reasons of record. Applicant's arguments have been fully considered, however they are not found persuasive for the following reasons.

The main premise behind applicant's arguments appear to be that Dasgupta et al. teaches a non-porous coating adhered to the battery case. To this extent, the claims are notably amended to recite a porous current collector.

Firstly, Dasgupta et al. is maintained to teach or at least suggest a porous current collector, in that the first and second current collector is formed of a non-metallic material such as tape-cast polypropylene. (col. 5 line 58 et seq.) This polymeric material, especially when tape-cast, is asserted as naturally porous, absent of a showing by applicant that the claimed invention distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990) The examiner further notes that the sole recitation in applicant's specification of a porous current collector was found on page 22 of applicant's specification, which describes a similar polymeric material, PVDF, as a "low porous electrode."

Applicant submits that Dasgupta et al. teaches a pore-free ceramic layer as coating the electrode. In reply, the examiner relies on the second embodiment of Dasgupta et al. disclosed starting in column 4 line 62, "[a]nother embodiment designed to avoid corrosion of the current collector of a lithium ion battery is replacing the metallic collector by an electrically conducting, continuous and coherent laminated polymer." In column 6 line 15 et seq., Dasgupta et al. teaches this polymer as replacing the metallic current collector plate, or, as wrapped around the metallic plate. In addition to the polymeric material asserted as being naturally porous for the reasons set forth above, the electrodes are considered porous in that the disclosed polymeric

Art Unit: 1745

material by Dasgupta et al., e.g. polypropylene, is *the same* polymeric material as that disclosed by applicant.

Claims 2, 9-12, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dasgupta et al. as applied to claims 1, 3-5, 13-15, 18-24 and 26-31 above, in view of Endo et al. (U.S. Pat. 6,022,641)

Arguments against Endo et al. appear to be directed to this reference failing to remedy alleged differences between Dasgupta et al. and the present claims. However, in view Dasgupta et al. being maintained as teaching or at least suggesting the claimed invention for the reasons discussed above, the rejection in view of Endo et al. is subsequently maintained for the reasons discussed in the previous Office action.

Allowable Subject Matter

Claims 6-8 are maintained objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, for the reasons set forth in the prior Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be 'P. Ryan', enclosed within a large, loopy oval shape.

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER